



SUPERIOR GRASS & FODDER CROPS 2018

HF
Seeds

SCOTLAND



HF Seeds have been at the forefront of grass seed innovation for 60 years. Farmers have come to rely on HF Seeds for high quality seeds leading to excellent livestock performance, whether cut or grazed.

The very best varieties, in terms of dry matter production, sward density, winter hardiness and feeding value are carefully selected to combine together into our famous grass seed mixtures. You can feel confident that purchasing an HF Seeds mixture is a good start to establishing a new grass sward, leading to the most cost effective means of ruminant animal production.

HF Seeds have been part of DLF since 1996. DLF are the world's largest grass and clover breeder with over 1,100 employees worldwide, of which 80 are directly employed in grass breeding. This grass breeding and development programme is at the core of what we do and what we have done since 1906. In recent years we have developed varieties with higher levels of digestible fibre – Digestible neutral detergent fibre (DNDF) for greater live weight gain per kilogram of dry matter eaten as well as seed treatments to improve the success of overseeding and deeper rooting more stress tolerant festuloliums or Advanced™ Grasses.

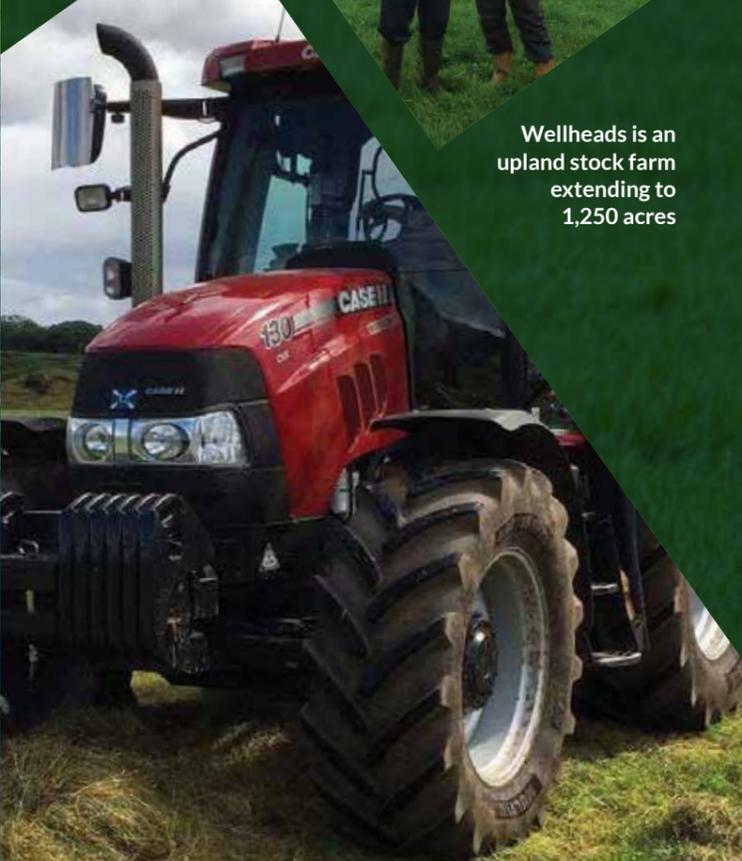
Hales Farm at Didbrook in Gloucestershire is the home of our UK trials work. Here we have 8500 grass and clover plots on trial as well as over 70 mixture trial plots. This allows us to assess how well individual varieties perform when sown along with other varieties and species. In Ireland we have 2200 plots sown at our Faithlegg site near Waterford, as well as 150 mixture plots, all of which adds to the information used to formulate our mixtures.

With the backing of DLF, HF Seeds continues to go from strength to strength.



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Leading the field for over 50 years



Wellheads is an upland stock farm extending to 1,250 acres

John is a former director of RHASS and of Aberdeen and Northern Marts

Good quality grass is essential to feed our 250 suckler cows (half spring/autumn calving) and 1,000 breeding ewes. We aim to produce quality Charolais yearling store calves and to sell the majority of our Suffolk and Texel cross lambs off their mothers, straight from grass. Farming from 600 to 1,230 feet in Aberdeenshire demands that grass mixtures perform well in terms of winter hardiness, sward density and livestock performance. We have found over many years that HF mixtures always produce high quality grass and plenty of it. Ewes and lambs are heavily stocked post lambing before moving to higher ground in early May, allowing a big silage crop to be taken in the first days of July. September born weaned calves do particularly well on these swards from early August through to sale at the end of September. We use both HF 11 and HF PD at Wellheads.

John Gordon
John, Fiona and Ewan Gordon,
Wellheads, Huntly

Seed supplied by Agrii

Picture shows John (father) and Ewan (son) Gordon



HF Mixture Quality

Good grass mixture design begins with the assessment of individual variety characteristics and then uses this information to combine mixture components in different proportions to produce the best possible mixture for the intended duration and purpose of the final sward.

High yields of dry matter will always be one of the most important considerations, along with sward density and digestibility. It is important to also consider the ability of the mixture to perform under stress, drought or otherwise, its palatability and how resistant the mixture is to certain diseases – such as crown rust, mildew and increasingly dreschlera. Winter hardiness and density are the two main contributing factors leading to good persistency. HF Seeds mixtures are renowned for their persistency across harsh northern areas and their longevity, due to consistent performance over many years.

04

Germination

There is a minimum germination for all certified seed used in the UK, but these standards are actually quite low. HF Seed varieties are selected from our own seed stocks that are at least 10% higher germination than the UK certification minimum standard. More live seeds in every bag is very important in producing dense, long lasting swards.

Species	UK Minimum Germination	HF Minimum Germination	HF Average 2017 Germination
Italian Ryegrass	75.0%	90.0%	94.2%
Perennial Ryegrass	80.0%	90.0%	93.9%
Timothy	80.0%	90.0%	95.1%

Purity

UK grass seed certification also allows the possibility of the presence of relatively high levels of serious grassland weeds. At HF Seeds we impose our own freedom from weeds standards, which are unequalled elsewhere.

This table shows the potential number of weed seeds which could be sown (per acre) each time a field is reseeded. The advantages of HF Seeds rigorous purity standards are easy to see.

Possible Weed Seed Numbers per acre	UK Minimum Purity Standard	HF Minimum Purity Standard
Docks	1,250	0
Couch	30,000	2,500
Blackgrass	25,000	2,500

I've been using HF mixtures for many years and always find that they do very well in our high rainfall area. We need good quality early grass and plenty of it, as well as the ability to grow big silage crops of top quality.

Bert and James Mitchell
Killellan Farm, Toward, Dunoon, Argyll
Seed supplied by Ralph Bova Farm Supplies

HF Forage Quality

The forage quality of grass refers to a range of measurements for different aspects of what each kilogram of dry matter can supply.

THIS COVERS:

- Protein Content**
- Metabolisable Energy**
ME measured in megajoules
- D-Value**
which is a measure of the digestible organic matter
- Water Soluble Carbohydrate**
sometimes called sugars
- Cell Wall Digestibility**
measured as digestible neutral detergent fibre or DNDF

Digestible (DNDF) → Indigestible (Lignin)



Standard variety, milk per kg dry matter



High DNDF variety, milk per kg dry matter

Time →

Ruminant animals chew the cud by moving a cud ball around in their stomachs to get the most out of fibre –

Digestible, Semi Digestible & Indigestible

This is what they do naturally and what makes them ruminants. By increasing the digestibility of the fibre through careful breeding, using the latest genomic breeding techniques we at DLF have been able to develop grass varieties with higher levels of digestible fibre, leading to more meat or milk from each kilogram of dry matter consumed.

Young immature leafy grass always produces forage with high digestibility but the plants have not bulked up enough so yields are low. If we leave grasses to bulk up for a larger crop then the digestibility historically falls, as illustrated below.

MORE MILK WITH DLF



VEGETATIVE:
Time for grazing



STEM ELONGATION:
Time for making silage with very high feeding value



BOOT:
Time for making silage



HEADING:
Time for making hay



ANTHESIS:
Too late for forage harvest!

Digestible (DNDF) →

Indigestible (Lignin)

High DNDF varieties do not suffer the same reduction in digestibility as the grass plants mature and so we are able to get the increased yield as plants bulk up, without as big a reduction in digestibility as seen with conventional varieties. **HF Mixtures now contain more DNDF varieties than ever before NIFTY, SOLOMON, DIWAN (T), PASTOUR, ASPECT (T) & TWYMAX (T) for Scotland and Ireland. Specifically for England and Wales we use CANCAN, CAVENDISH & ROMARK as well.**

05

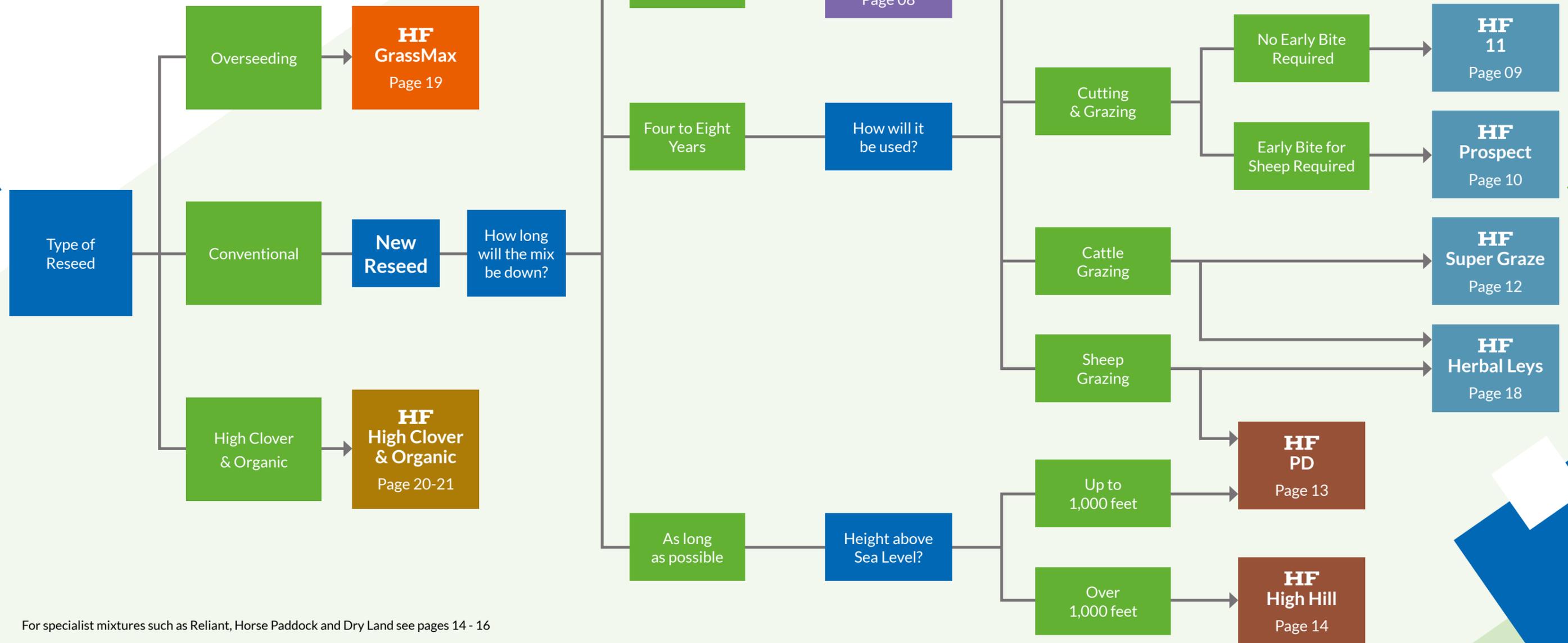
HF Mixture Selector

HF mixtures are designed and formulated to meet specific sward uses.

Significant differences between mixtures are not always obvious but even small differences can change the way in which the final sward behaves. Selection of the wrong mixture will inevitably mean that the sward will not perform up to expectations simply because it is the wrong mix for the job.

The HF mixture selector is designed to help answer many of the common questions in mixture selection, however it is not possible to cater for every situation and if in doubt contact HF Seeds for further advice.

01506 674800 FOR ALL YOUR FORAGE SOLUTIONS



For specialist mixtures such as Reliant, Horse Paddock and Dry Land see pages 14 - 16

DISCLAIMER
Any information provided in this catalogue is given in good faith and to the best of our existing knowledge. Any advice should therefore be taken as a general guide only and not relied upon for all conditions and circumstances. HF Seeds cannot accept any legal liability for information given in this guide. In any instance where there are shortages of specified varieties HF Seeds reserves the right to substitute equivalent varieties.

HF Bonus

1 to 2 year mixture

MERIBEL
Italian Ryegrass

HUNTER
Tetraploid
Italian Ryegrass

PERSEUS
Advanced™ Italian Ryegrass

LOFA
Advanced™ Hybrid Ryegrass

CITELIAC
Tetraploid
Hybrid Ryegrass

Mainly Cutting Mixture

Bonus is designed for maximum yield over two full production years

- The top yielding mixture
- High tetraploid content ensures high quality silage
- Capable of 3 or 4 quality cuts per year
- Not suitable for undersowing a cereal as too aggressive

▶ **Recommended sowing rate:**
13-14 kg/acre 32-35 kg/HA



“

Grass in March and April is worth far more to me than any other month. It cuts my ewe feed bill and gets the lambs off to a great start, with them all finishing straight off the grass. HF Surecrop gives me this vital early production and plenty of grass through to the end of the year.

Simon Gray
Middle Ord Farm,
Berwick Upon Tweed

Seed supplied by
Scotgrain Agriculture



“

A long-time customer of HF seeds, using both HF PD and HF Surecrop.

Stewart Anderson
Stouslie Farm, Hawick
Seed Supplied by Clark and Weir

Mainly Cutting Mixture

Surecrop is a high performance mixture suitable for Cutting or Grazing

- Contains a high proportion of Advanced™ Grasses for big yields and stress tolerance
- Will provide 3 full years of quality silage or grazing
- High tetraploid content for rapid fermentation in the pit or grazing palatability
- HF CUTTING White Clover blend included at low percentage rate but may be changed to Red Clover

▶ **Recommended sowing rate:**
13-14 kg/acre 32-35 kg/HA

HF Surecrop

3 year mixture

PERSEUS
Advanced™ Italian Ryegrass

LOFA
Advanced™ Hybrid Ryegrass

SOLID
Tetraploid
Hybrid Ryegrass

CITELIAC
Tetraploid
Hybrid Ryegrass

SEAGOE
Tetraploid
Intermediate Perennial Ryegrass

HF CUTTING CLOVER BLEND
White Clover

HF 11

4 to 8 year mixture

BOYNE
Intermediate Perennial Ryegrass

NIFTY
Intermediate Perennial Ryegrass

COPELAND
Intermediate Perennial Ryegrass

DIWAN
Tetraploid
Intermediate Perennial Ryegrass

SEAGOE
Tetraploid
Intermediate Perennial Ryegrass

ASTONCHIEFTAIN
Late Perennial Ryegrass

GLENROYAL
Late Perennial Ryegrass

GLENVEAGH
Late Perennial Ryegrass

ASPECT
Tetraploid
Late Perennial Ryegrass

KINTYRE
Tetraploid
Late Perennial Ryegrass

DOLINA
Timothy

PROMESSE
Timothy

HF DUAL PURPOSE CLOVER BLEND
White Clover

Dual Purpose Mixture

A flexible, rotational mixture renowned for its consistent yield and performance, under different management regimes

- Scotland's bestselling mixture, which is also available as a high clover and a no clover option
- Contains the very best and most productive varieties
- Persistence is ensured by top class sward density and winter hardiness
- Specifically formulated for high DNDF forage, giving increased meat or milk production per kg of dry matter

▶ **Recommended sowing rate:**
13-15 kg/acre 32-35 kg/HA

“

Early grass is very important to us as we run 800 ewes with their lambs as well as 120 suckler cows and their calves. HF 11 is closed off from the sheep at the end of April and the later heading varieties gives us a high quality 1st cut. We contract fatten a further 1200 lambs so tight swards and strong aftermaths are important. I have used the HF mixtures for more than 10 years and am very pleased with their performance in this high rainfall area.

Mr Ian Knight
Stepney Farms, Cumbria

Seed supplied by
Reg Thornthwaite



HF Prospect

4 to 8 year mixture

- GENESIS**
Early Perennial Ryegrass

- BOYNE**
Intermediate Perennial Ryegrass

- NIFTY**
Intermediate Perennial Ryegrass

- DIWAN**
Tetraploid
Intermediate Perennial Ryegrass

- SEAGOE**
Tetraploid
Intermediate Perennial Ryegrass

- GLENROYAL**
Late Perennial Ryegrass

- GLENVEAGH**
Late Perennial Ryegrass

- ASPECT**
Tetraploid
Late Perennial Ryegrass

- KINTYRE**
Tetraploid
Late Perennial Ryegrass

- DOLINA**
Timothy

- PROMESSE**
Timothy

- HF DUAL PURPOSE CLOVER BLEND**
White Clover

Dual Purpose Mixture

Similar to HF 11 but containing early Perennial Ryegrass for early bite

- Specifically formulated for early spring growth
- Designed for early sheep grazing, prior to first cut silage
- Offers great flexibility to beef and sheep farms
- High inclusion of White Clover, the same as HF 11

Recommended sowing rate:
13-15 kg/acre 32-35 kg/HA

Dual Purpose/Cutting Mixture

Cutsward is a high performance mixture suitable for Cutting or Grazing

- Designed with later heading varieties for later areas
- Varieties selected for high cutting yield and quality
- Slightly higher inclusion of Timothy for colder and later areas
- Excellent winter hardiness and sward density

Recommended sowing rate:
14-15 kg/acre 32-35 kg/HA

HF Super Silage

3 to 6 year mixture

- LOFA**
Advanced™ Hybrid Ryegrass

- BOYNE**
Intermediate Perennial Ryegrass

- COPELAND**
Intermediate Perennial Ryegrass

- DIWAN**
Tetraploid
Intermediate Perennial Ryegrass

- SEAGOE**
Tetraploid
Intermediate Perennial Ryegrass

- GLENVEAGH**
Tetraploid
Intermediate Perennial Ryegrass

- KINTYRE**
Tetraploid
Late Perennial Ryegrass

- ALFONSO**
Tetraploid
Late Perennial Ryegrass

- HF CUTTING CLOVER BLEND**
White Clover

Intensive Gutting Mixture

Specifically designed for 3, 4 or even 5 cuts

- Formulated for high yields at first cut and subsequent cuts
- Designed for fast regrowth and quality, leafy silage
- Contains a substantial proportion of High DNDF varieties
- High sugar grasses and no Timothy ensures top quality silage

Recommended sowing rate:
13-15 kg/acre 32-35 kg/HA

“

I have recently installed robotic milking for my jersey herd and to suit the system I now zero graze and aim for top quality silage. Milk solids from forage is the profit driver and I find HF 11 to be very easily managed. HF Supersilage suits the zero grazer well on the drier ground, cows really like it and it reduces rotation days due to its rapid regrowth.

Samuel Johnson
Fintona
County Tyrone



HF Cutsward

4 to 8 year mixture

- BOYNE**
Intermediate Perennial Ryegrass

- COPELAND**
Intermediate Perennial Ryegrass

- DIWAN**
Tetraploid
Intermediate Perennial Ryegrass

- SEAGOE**
Tetraploid
Intermediate Perennial Ryegrass

- GLENVEAGH**
Late Perennial Ryegrass

- TODDINGTON**
Late Perennial Ryegrass

- ALFONSO**
Tetraploid
Late Perennial Ryegrass

- KINTYRE**
Tetraploid
Late Perennial Ryegrass

- TWYMAX**
Tetraploid
Late Perennial Ryegrass

- DOLINA**
Timothy

- PROMESSE**
Timothy

- HF CUTTING CLOVER BLEND**
White Clover

HF Super Graze

4 to 8 year mixture

ASTONLORD
Intermediate Perennial Ryegrass

BOYNE
Intermediate Perennial Ryegrass

NIFTY
Intermediate Perennial Ryegrass

SEAGOE
Tetraploid
Intermediate Perennial Ryegrass

ASTONCHIEFTAIN
Late Perennial Ryegrass

GLENROYAL
Late Perennial Ryegrass

TODDINGTON
Late Perennial Ryegrass

ALFONSO
Tetraploid
Late Perennial Ryegrass

ASPECT
Tetraploid
Late Perennial Ryegrass

KINTYRE
Tetraploid
Late Perennial Ryegrass

HF GRAZING CLOVER BLEND
White Clover

Intensive Grazing Mixture

The ultimate cattle grazing mixture

- High tillering varieties selected for a dense, leafy sward
- Formulated to even out grass production for the whole grazing year
- Palatable, high sugar varieties with excellent sward density and with good levels of DNDF
- A high inclusion of HF Grazing White Clover blend and no Timothy leads to improved animal performance

Recommended sowing rate:
13-15 kg/acre 32-35 kg/HA



“ We have 100 spring calving cows of our own and we finish about 500 head of cattle in total, so good quality grazing and silage are very important to us. Some cattle are also fattened off the grass every year, with in field hoppers allowing us to top up with our own barley and protein mix later in the season. We also fatten about 600 lambs off the grass through the winter months. HF Surecrop consistently yields very well for us as part of our rotational grass system when both cut and when grazed. This helps keep the farm fertile for our cereal crops that are a very important part of the farm income.

Neil Davidson
Auchtydonald
Mintlaw, Aberdeenshire
Seed supplied by Agrii



HF PD

8 year+ mixture

GENESIS
Early Perennial Ryegrass

BOYNE
Intermediate Perennial Ryegrass

COPELAND
Intermediate Perennial Ryegrass

NIFTY
Intermediate Perennial Ryegrass

SEAGOE
Tetraploid
Intermediate Perennial Ryegrass

ASTONCHIEFTAIN
Late Perennial Ryegrass

GLENROYAL
Late Perennial Ryegrass

ALFONSO
Tetraploid
Late Perennial Ryegrass

DOLINA
Timothy

PROMESSE
Timothy

MAXIMA
Creeping Red Fescue

HF DUAL PURPOSE CLOVER BLEND
White Clover

Permanent Mixture

The famous versatile long term mixture giving quality forage for many years

- A dual purpose mixture which has become synonymous with quality permanent grass
- Very persistent and winter hardy which contribute to its longevity
- Includes high levels of White Clover and Timothy, as well as a little creeping red fescue for increased density
- Will produce plenty of early grass, even in harsher parts of Scotland

Recommended sowing rate:
14-16 kg/acre 35-40 kg/HA



“

We have both our own ewes and wintering sheep from Towiemore running over all our grassland through the winter months and into the spring, so we need a mixture that is dense and hardy, but will still produce a big silage cut in June. The silage fields are then grazed with cows and calves right into November. The silage quality is so good we have been able to reduce our bought in feed requirements for both sheep and cattle, which are sold store, often to repeat buyers.

HF mixtures are the best seeds for our ground and really suit our farming system.

Mr Graeme Shand
Farm manager for Mr Ian Henderson
Wester Elchies Farm, Craigellachie, Morayshire
Seed supplied by Scotgrain Agriculture



HF High Hill

8 year+ mixture

ASTONLORD
Intermediate Perennial Ryegrass

BOYNE
Intermediate Perennial Ryegrass

NIFTY
Late Perennial Ryegrass

GLENROYAL
Late Perennial Ryegrass

GLENVEAGH
Late Perennial Ryegrass

ASPECT
Tetraploid
Late Perennial Ryegrass

DOLINA
Timothy

PROMESSE
Timothy

MAXIMA
Creeping Red Fescue

HF GRAZING CLOVER BLEND
White Clover

Permanent Mixture

The long term grazing mixture

- Designed to survive in harsh upland areas and to produce high grazing yields
- Ingredients are selected for cold, snow tolerance and winter hardiness
- Contains a high inclusion of dense, leafy late Perennial Ryegrasses
- High content of both HF Grazing Clover blend and Timothy for lower input situations

Recommended sowing rate:
14-16 kg/acre 35-40 kg/HA

HF Scotshay

4 to 8 year mixture

BOYNE
Intermediate Perennial Ryegrass

COPELAND
Intermediate Perennial Ryegrass

SOLOMON
Intermediate Perennial Ryegrass

GLENVEAGH
Late Perennial Ryegrass

LAURA
Meadow Fescue

DOLINA
Timothy

PROMESSE
Timothy

HF DUAL PURPOSE CLOVER BLEND
White Clover

Hay Making Mixture

A modern mixture for traditional Haymaking

- A mixture of species used specifically in hay making
- Big yields of easily won hay (no tetraploid Ryegrasses)
- High Timothy inclusion
- Good winter hardiness ensures consistent bulk for many years

Recommended sowing rate:
13-15 kg/acre 32-37 kg/HA

HF Reliant

8 year+ mixture

GENESIS
Early Perennial Ryegrass

BOYNE
Intermediate Perennial Ryegrass

MAGICIAN
Tetraploid
Intermediate Perennial Ryegrass

GLENVEAGH
Late Perennial Ryegrass

ASPECT
Tetraploid
Late Perennial Ryegrass

DOLINA
Timothy

PROMESSE
Timothy

DONATA
Cocksfoot

MAXIMA
Creeping Red Fescue

HF GRAZING CLOVER BLEND
White Clover

Permanent Mixture

A traditional mixture for more extensive or drought prone areas

- Contains Cocksfoot for early grass, winter survival and drought tolerance
- Formulated to provide season long production and outstanding persistency
- Can be closed off and cut for hay or silage
- Varieties and species selected for very good sward density

Recommended sowing rate:
14-16 kg/acre 35-40 kg/HA

HF Horse Paddock

4 to 8 year mixture

SOLOMON
Intermediate Perennial Ryegrass

BOYNE
Intermediate Perennial Ryegrass

GLENVEAGH
Late Perennial Ryegrass

MAXIMA
Creeping Red Fescue

PROMESSE
Timothy

Equine Use Mixture

A hard wearing, persistent sward designed for horses

- Ryegrasses selected for top sward density ratings
- Formulated with attractive but low sugar forage to avoid laminitis
- Creeping Red Fescue binds the sward and helps repair poaching
- High Timothy content for grazing horses and to boost haymaking if required

Recommended sowing rate:
15 kg/acre 37 kg/HA

“We’ve sown nothing but HF Mixtures for a number of years now and are delighted with how they yield. The farm lies at 1000ft above sea level and with 300 dairy cows and followers to feed we need lots of very high quality silage. We were pleased to win a national silage competition in 2017 with our top class silage.”

3 generations of the Hunter family
Cape Farm, Berrier, Penrith
Seed supplied by Steven Walker

HF Dryland

3 to 5 year mixture

MAHULENA
Advanced™ Tall Fescue

LOFA
Advanced™ Hybrid Ryegrass

MAGICIAN
Tetraploid
Intermediate Perennial Ryegrass

ASPECT
Tetraploid
Late Perennial Ryegrass

DONATA
Cocksfoot

Drought Prone Areas Mixture

A specialist mixture for sandy/light soils

- All species are very deep rooting
- Will produce a large bulk of forage, even in drought prone soil
- Excellent disease resistance particularly crown rust which can be a big problem in hot, dry conditions
- Suitable for cutting or grazing

▶ Recommended sowing rate:
15 kg/acre 37 kg/HA



HF CC

Over winter/early spring mixture

MERIBEL
Italian Ryegrass

EMERALD
Forage Rape

GREEN GLOBE
White Turnip

Sheep Grazing Mixture

Designed to produce autumn and spring grazing

- Green Globe is a white fleshed, green skinned turnip providing good winter forage
- Do not leave it to grow too tall or the Italian Ryegrass will suffer
- A highly productive catch crop mixture
- Can be used for ewes or fattening lambs

▶ Recommended sowing rate:
9 kg/acre 22 kg/HA

“

We have a mixed farm in the Howe of Alford, Aberdeenshire with a beef fattening enterprise and a flock of Texel cross Ewes. The whole farm is sown to HF11, which gives us plenty of early spring grass for Ewes and Lambs, high quality silage in June and leafy summer grazing for the beef cattle. Consistency is important to us and we get cracking dense swards, that are persistent and come through the winter here well.

Alan Grieve
Elrick Farm
Alford, Aberdeenshire
Seed supplied by W N Lindsay

HF Multipurpose Landscaper

Long term mixture

GLENVEAGH
Late Perennial Ryegrass

MAXIMA
Creeping Red Fescue

Landscaping Mixture

Ideal for riverbanks, verges, fruit farms and orchards

- Extreme sward density and good wear tolerance
- Designed to be low maintenance
- Much lower sowing rate than an amenity type mixture
- Has an attractive appearance with a good dark green colour

▶ Recommended sowing rate:
25 kg/acre 65 kg/HA

“

The herd is now 80 Holstein Friesian and Jersey cross cows averaging 6250 litres per year, of which 3750 litres is produced from forage. Grass production averages between 14 - 15 tonnes DM/ha/annum, with 2017 being a record year with 16.2 tonnes DM/ha/annum, despite a very wet back end. The key is early turnout and 10 grazings from each paddock. The whole farm is sown with HF11, with the exception of 1 heavier paddock which is sown to HF PD.

David Hunter
Newtownstewart
County Tyrone

HF CD

Over winter/early spring mixture

MERIBEL
Italian Ryegrass

EMERALD
Forage Rape

Sheep Grazing Mixture

Similar to HF CC, but without the white turnips

- Our most popular catch crop mixture
- Great early spring growth from the Italian Ryegrass
- Graze early to avoid damaging the Italian Ryegrass
- Can be used for ewes or fattening lambs

▶ Recommended sowing rate:
9 kg/acre 22 kg/HA



HF Rapid Gain

3 to 4 year mixture

CHOICE

Perennial Chicory

TONIC

Plantain – Ribgrass

HF RED CLOVER BLEND

Red Clover

HF GRAZING CLOVER BLEND

White Clover

ASPECT

Tetraploid
Late Perennial Ryegrass

Rotational Grazing Mixture

A new mixture from HF for both cattle and sheep contains both perennial chicory and plantain

- Very high protein, energy and mineral content for big live weight gains
- Drought tolerant and shown to reduce worm burden in lambs
- Rotationally graze and best suited to lighter soils with a good pH
- Clovers help livestock performance and reduce nitrogen requirements

▶ **Recommended sowing rate:**
8 kg/acre 20 kg/HA

Rotational Grazing Mixture

Another new mixture from HF for both cattle and sheep contains plantain

- Highly palatable and nutritious as long as it is well managed
- More tolerant of poorer soils and lower pH than HF Rapid Gain
- The clovers have been selected to withstand hard rotational grazing
- Aspect is a late, dense tetraploid ryegrass which is known for its exceptional palatability and ease of rotational grazing management

▶ **Recommended sowing rate:**
8 kg/acre 20 kg/HA

HF Gromore

3 to 4 year mixture

TONIC

Plantain – Ribgrass

HF RED CLOVER BLEND

Red Clover

HF GRAZING CLOVER BLEND

White Clover

ASPECT

Tetraploid
Late Perennial Ryegrass

HF GrassMax™ CUT

CITELIAC

Tetraploid
Hybrid Ryegrass

MAGICIAN

Tetraploid
Intermediate Perennial Ryegrass

ALFONSO

Tetraploid
Late Perennial Ryegrass

HF CUTTING CLOVER BLEND

White Clover

Overseeding Mixture

For cutting fields

- Ryegrass content is 100% large tetraploid seeds which establish aggressively and boost sugar content
- Designed to improve silage yields in tired or open swards, sow after the last cut of the season
- Is also available in a Red Clover option, with 30% inclusion (HF GRASSMAX RED)
- Has 10% HF White Clover Cutting blend as a standard, but also available as a no clover option

▶ **Recommended sowing rate:**
10 kg/acre 25 kg/HA

Iain MacKenzie

oversowing fields in Sutherland

Seed supplied by
W & A Geddes, Brora

Photo by Kirsty MacKenzie

HF GrassMax™ GRAZE

MAGICIAN

Tetraploid
Intermediate Perennial Ryegrass

TWYMAX

Tetraploid
Late Perennial Ryegrass

ASPECT

Tetraploid
Late Perennial Ryegrass

HF GRAZING CLOVER BLEND

White Clover

Overseeding Mixture

For grazing fields

- Varieties specifically selected for their grazing yield
- High sugar grasses used to increase palatability and improve livestock performance
- Can be drilled at any time during the grazing season
- Has 10% HF Grazing White Clover as standard, but also available as a no clover option

▶ **Recommended sowing rate:**
10 kg/acre 25 kg/HA

HF GrassMax™ DUAL PURPOSE

CITELIAC

Tetraploid
Hybrid Ryegrass

MAGICIAN

Tetraploid
Intermediate Perennial Ryegrass

ASPECT

Tetraploid
Late Perennial Ryegrass

HF DUAL PURPOSE CLOVER BLEND

White Clover

Overseeding Mixture

For cutting and grazing fields

- The top selling Overseeding mixture for cutting and grazing fields
- Ryegrass varieties are selected for performance under both cutting and grazing
- Very good resistance to all the main grass diseases
- Has 10% HF Dual Purpose White Clover as standard. Also available as a no clover option

▶ **Recommended sowing rate:**
10 kg/acre 25 kg/HA

HIGH CLOVER & ORGANIC MIXTURES

All the HF High Clover Mixtures are available as Organic Mixtures (70% Organic Content)

HF High Clover SHORT TERM

2 to 3 year mixture

SOLID

Tetraploid
Hybrid Ryegrass

CITELIAC

Tetraploid
Hybrid Ryegrass

LOFA

Advanced™ Hybrid Ryegrass

PERSEUS

Advanced™ Italian Ryegrass

HF RED CLOVER BLEND

Red Clover

Mostly Cutting Mixture

A High Performance Red Clover Mixture

- Red Clover is included at the optimum 25% rate to produce lots of high protein silage
- Contains aggressive, fast growing species that can compete with the Red Clover
- High sugar varieties included to give good fermentation
- Can give up to 3 cuts per year and can last for 3 full years

Recommended sowing rate:
12-14 kg/acre 30-35 kg/HA



As organic farmers we need top quality grass swards to produce as much livestock performance from grass as is possible. Lambing in April, but still selling 97% of our 1500 lambs straight off grass by the first week in November, with no hard feeding, means that our clover rich swards really need to put kilos onto livestock quickly. The ewes are housed in mid January and are feed on red clover silage, as are the 250/300 head of cattle we fatten every year. HF high clover organic mixtures consistently give us the performance we require. They are dense, hard wearing and give us lots of highly nutritious grass over an extended season.

Rob Parrish
Hassendeanburn,
Denholm, Hawick

Seed supplied by Frontier
Agriculture Berwick

Mostly Grazing Mixture

Leafy, dense swards

- Varieties are selected for their grazing performance
- Contains mostly late Perennial Ryegrass that can withstand heavy grazing
- High DNDF varieties leading to excellent animal performance
- The small and medium leaf clovers are selected for their persistency under grazing

Recommended sowing rate:
14-15 kg/acre 35-37 kg/HA

HF High Clover GRAZE

5 year+ mixture

ASTONL LORD

Intermediate Perennial Ryegrass

NIFTY

Intermediate Perennial Ryegrass

GLENROYAL

Late Perennial Ryegrass

PASTOUR

Late Perennial Ryegrass

TODDINGTON

Late Perennial Ryegrass

ALFONSO

Tetraploid
Late Perennial Ryegrass

ASPECT

Tetraploid
Late Perennial Ryegrass

HF GRAZING CLOVER BLEND

White Clover



A Dual Purpose Mixture

A very flexible mixture

- Contains high DNDF varieties with excellent forage quality
- High percentage of tetraploids to help fermentation and aid the growth of clovers
- Small Red Clover inclusion to help with nitrogen fixation in the early years
- A high proportion of HF Dual Purpose Clover is included for increased production

Recommended sowing rate:
14-15 kg/acre 35-37 kg/HA

HF High Clover DUAL PURPOSE

4 to 8 year mixture

COPELAND

Intermediate Perennial Ryegrass

DIWAN

Tetraploid
Intermediate Perennial Ryegrass

MAGICIAN

Tetraploid
Intermediate Perennial Ryegrass

GLENVEAGH

Late Perennial Ryegrass

TODDINGTON

Late Perennial Ryegrass

ALFONSO

Tetraploid
Late Perennial Ryegrass

ASPECT

Tetraploid
Late Perennial Ryegrass

PROMESSE

Timothy

HF RED CLOVER BLEND

Red Clover

HF DUAL PURPOSE CLOVER BLEND

White Clover

HF Alfalfa

Over winter/early spring crop

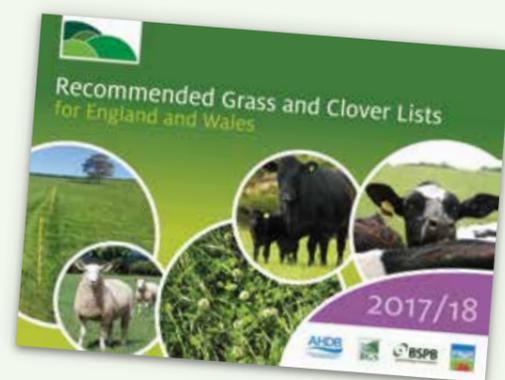
Mostly Cutting Crop

HF Alfalfa is a leguminous crop which suits light or medium soils

- Increased self-sufficiency with 18 – 20% protein
- Higher feed intakes and improved digestibility
- Fixes nitrogen for companion and subsequent crops
- Has a very long, deep tap root which makes Alfalfa drought tolerant and improves soil structure a lot

Recommended sowing rate:
10 kg/acre 25 kg/HA





Variety	Specie	Description	SAC	NIAB
PERENNIAL RYE GRASSES				
Genesis	Early	An excellent Perennial Ryegrass with exceptional quality & grazing yields	1	✓
Astonlord New	Intermediate	Excellent grazing yields & quality throughout the season	1	
Boyne	Intermediate	Highest yielding variety in this group. With very dense characteristics	1	✓
Copeland New	Intermediate	Good early growth from a late heading dual purpose variety	1	
Nifty	Intermediate	Excellent ground cover combined with exceptional grazing yields	1	✓
Premium (Organic Only)	Intermediate	Good mid season growth. A dual purpose variety	1	✓
Solomon	Intermediate	Great all round variety, with high DNDF & D value	1	✓
Diwan	Intermediate (T)	Good all round variety offering good yields and high DNDF	1	✓
Magician	Intermediate (T)	Produces very high grazing yields throughout the growing season	1	
Seagoe	Intermediate (T)	Good early & late season growth from this top performing variety	1	✓
Astonchieftain	Late	Excellent grazing from this very late, dense leafy variety	1	
Glenroyal	Late	Good mid and late season growth, with a very dense sward rating	1	
Glenveagh	Late	Good mid to late season growth with high sward density	1	
Pastour	Late	High DNDF variety with no obvious weaknesses	1	
Toddington	Late	Good dual purpose forage variety with good disease resistance & Density	1	✓
Aspect	Late (T)	Dense, winter hardy and exceptionally palatable	1	✓
Alfonso	Late (T)	Very dense variety with both good early and late growth	1	✓
Kintyre	Late (T)	Excellent cutting yields & outstanding aftermath grazing	1	
Twymax	Late (T)	Very dense, winter hardy & high DNDF variety	1	✓

Variety	Specie	Description	SAC	NIAB
FESTULOLIUM				
Lofa	Hybrid Festulolium	Excellent stress tolerance, with fantastic early growth		
Mahulena	Tall Fescue Festulolium	High yielding, winter hardy & persistent. No stems in regrowth		
Perun	Italian Festulolium	Better persistence than a traditional Italian, with high quality forage		
Perseus	Italian Festulolium	Huge production of leafy growth from this late heading Festulolium		
ITALIAN RYEGRASS				
Alamo	Italian	A good variety with excellent late season digestibility and top yields in the year of sowing	1	✓
Meribel	Italian	One of the highest yielding Italians on the UK market and very good sward density	1	✓
Hunter	Italian (T)	High yields at 1 st and 2 nd cut combined with excellent winter hardiness	2	✓
HYBRID RYEGRASS				
Astoncrusader New	Hybrid (T)	High yields in the first year of sowing and first cut, also very dense	1	
Citeliac	Hybrid (T)	A very good looking Perennial type of hybrid with good early growth	2	✓
Solid	Hybrid (T)	High yielding dense hybrid with good winter hardiness	2	✓
TIMOTHY				
Dolina	Timothy	Winter hardy with good early & late season growth	1	✓
Promesse	Timothy	Good dense variety with excellent Late season & aftermath growth	1	✓
WHITE CLOVER				
Avoca	White Clover Medium	Still at the top of the recommended list after 25 years, Rated AA for ground cover	1	✓
Brianna	White Clover Large	New and extremely large white clover which has excellent scores in all categories	1	✓
Buddy	White Clover Medium	Another top rated medium leaved from DLF, excellent early growth	1	✓
Galway	White Clover Small	Excellent persistence under both cutting and hard grazing	2	✓
Iona	White Clover Medium	Excellent growth throughout the season, rated AA for ground cover	1	✓
Rivendel	White Clover Small	A useful small leaved clover that is tried and tested scoring well in all categories	1	
Violin	White Clover Medium	Highest yielding clover on the recommended list, outstanding variety	1	✓
RED CLOVER				
Pavo	Red Clover	A good very early flowering variety	N/A	N/A
Sangria	Red Clover	A good strong French Red Clover that measures up well against others	N/A	N/A
Amos	Red Clover (T)	Particularly high yielding at 1st cut and in year 1 and 2	1	✓
Magellan	Red Clover (T)	Highest yielding variety on the SAC list. Outstanding 3rd year production	1	✓

Swedes

Swedes are a full season crop that will last until the end of March or early April. They may be grazed in situ or lifted for stock feed or culinary use. They perform well in Scotland and the north producing 70 to 80 tonnes of fresh weight per hectare of high ME feed (12.8 to 13.1 MJ/kg DM).

Variety	Skin Colour	Flesh Colour	Dry Matter	Comments
Airlie	Light Purple	Creamy white	Low/Medium	Good disease resistance and very uniform
Gowrie	Purple	Yellow	Medium	Uniform, high yielding and has some club root tolerance and good mildew
Invitation	Purple/Bronze	Yellow	Very high	Very high yielding and winter hardy. Excellent resistance to club root and mildew
Kenmore	Bronze/Green	White	Medium	Good winter hardiness giving a wide window of utilisation. Big fresh yields
Lomond	Purple	Yellow	Medium/High	Good club root and mildew resistance
Marian	Purple	Yellow	Medium	A good culinary variety
Ruta Otofte	Dark Purple	Cream	Medium/High	Very popular variety with sheep farmers. Good winter hardiness

Fodder Beet

High yielding and palatable. High dry matter varieties sit lower into the ground, are more frost tolerant but often have a higher dirt tare. Medium dry matter varieties sit out of the ground more, are easier to harvest and may be grazed. Good weed control is essential when establishing fodder beets.

Variety	Colour	Comments
Alpes	Yellow	Easy lifting variety, very clean, popular
Bangor	Yellow	High yielding above the ground and excellent for grazing in situ
Monro NEW	Red	Low DM, high yielding variety for grazing in situ
Jamon	Orange	Very palatable. Can be grazed in situ
Enermax	White	A dual purpose variety, very high yields, clean
Kyros	White	A good value for money variety. High DM, low growing
Magnum	White	A well-known reliable variety. High DM, low growing
Nestor	White	A good value for money variety. High DM, low growing

Kale

The highest yielding leafy brassica. Grazed by sheep and cattle and occasionally ensiled. Good frost tolerance, but MUST be looked after with good fertility, weed and pest control.

Variety	Height	Use	Comments
Goldeneye	Very tall	Game cover	Strong stem and leafy top, club root tolerant
Gruner Angeliter	Very tall	Cattle	Winter hardy and very high yielding
Maris Kestrel	Medium short	Sheep	Popular leafy sheep grazing variety
Sovereign	Medium tall	Cattle and sheep	High leaf to stem ratio, winter hardy and club root tolerant. Our best selling kale

Stubble Turnips

Stubble turnips are a fast growing catch crop that are ready to start grazing from 10 to 12 weeks after sowing. Bulbing types are more winter hardy than leafy types, which have better root systems.

Variety	Type	Comments
Barkant	Bulb	Very popular high yielding variety with some winter hardiness. Roots are slightly smaller, but highly digestible
Vollenda	Bulb	Large leaves on this fast establishing tetraploid variety. Good bulb size and palatability
Avalon	Leafy	A new variety. Very leafy and covers the ground quickly
Tyfon	Leafy	It is a cross between a Chinese cabbage and a stubble turnip. Fast growing with reasonable potential for regrowth
Green Globe	Maincrop	Very high fresh yields from large, well anchored and palatable roots. Can be utilised to the end of January

Forage Rape and Hybrids

This fast growing crop can be utilised by cattle and sheep and has a wide period of utilisation (mid summer and autumn). Highly digestible energy crop which is very palatable and is relatively simple to establish.

Variety	Type	Comments
Emerald	Forage rape	Very popular, fast establishing and palatable. Good disease resistance. Proven over many years in all areas
Akela (organic)	Forage rape	Very late flowering with good winter hardiness. Only Organic seed available
Spitfire	Rape x kale cross	High DM yields of palatable leafy growth. Stems have a low DM so are often grazed. Has good regrowth potential
Zoom (Composite)	Hybrid brassica and rape	A mixture of Winfred hybrid brassica and forage rape which is exceptionally quick to establish and has excellent leaf to stem ratio

“

Vollenda sown in early August and photographed at the end of October, fertilised with 90 units of N = 48t/Ha fresh yield.

John Forman

Fridayhill
Strichen

Seed Supplied by Frontier
Agriculture

Basic Payment Scheme – Greening

Greening has been introduced to improve the environmental performance of farming. It is mandatory for applicants to the Basic Payment Scheme BPS to comply with greening requirements, where relevant. There are three elements to Greening :-

Permanent Pasture

Land out of rotation for more than five years

Crop Diversification on Arable Land

Often called the “3 crop rule” (temporary grass is also arable)

Ecological Focus Areas (EFA)

6 different options to manage a weighted 5% of land as EFA

The basic principles of Greening are the same throughout the UK, but each region has its own specific requirements. Below are the Scottish Greening options. Please check the exact regulations within your own area.

Variety	Basic Guide	EFA Weighting	Suggested Mixtures
EFA Fallow Land	(EFAFAL) Fallow Period 15th January to 15th July. No agricultural production between these dates. Wild Bird Mixtures & Wild Flower mixtures are encouraged and may be sown during the fallow period. After the fallow period is over grass may be cut or grazed. After the 16th July, plan ahead for next year and establish a late heading mixture for 2019.	1.0	EFA Fallow mixtures See opposite BGM Mixtures WBS mixtures Farmland Wild Bird Mixture
EFA Margins	(EFAFM) Period is 1st January to 31st December. They should be around the margin of a field or split 2 crops within a field. Must be between 1m and 20m wide. You are allowed to cut for hay or silage after 15th July. If not beside a watercourse it may be grazed. Wild flower, wild bird seed and normal grass mixtures may be established.	1.5	BGM mixtures WBS mixtures Wildflower mixtures Any Grass mixtures
EFA Catch Crops	(EFACC) Establish the crop in spring. The only catch crop you can grow will be a cereal nurse crop with undersown grass. It should be a recognised grass seed mixture. The catch crop must be retained until at least the 31st December. You may graze the catch crop after harvest of the main crop.	0.3	Any Grass mixtures Italian Catch Crop mixture
EFA Green Cover	(EFAGC) Establish the green cover crop by 1st November. Maintain the green cover up to 31st December inclusive. Do not graze during the maintenance period 1st November and 31st December. It must be a mixture of 2 or more of the following: Alfalfa, barley, red clover, white clover, mustard, oats, phacelia, radish, rye, triticale and vetch.	0.3	N – Rich Cover Mix Spring Green Cover Mix Over Winter Green Cover Mix
EFA Nitrogen Fixing Crops	(EFANFIX) You must ensure that all EFA nitrogen-fixing crops are surrounded by a claimed EFA margin. Therefore you can not graze the margin of the field after harvest. You cannot harvest before 1st August to protect ground nesting birds. You must grow 2 of the following: Alfalfa, beans, birdsfoot trefoil, chickpea, red and white clover, lentils, lupins, peas and vetch. Mixtures are now allowed, but the nitrogen fixing species must be dominant by weight.	0.7	Alfalfa Birdsfoot Trefoil Peas & Beans Red & White Clover Vetch
EFA Hedges EFA Agro-Forestry	(EFAH) These are new EFA options for Scotland that do not require any seed	Various	-

HF Fallow No.1

- 35% Late Perennial Ryegrass (diploid)
- 50% Late Perennial Ryegrass (tetraploid)
- 10% Timothy
- 5% White Clover Blend

100%

- The Timothy and the late heading Perennial Ryegrasses will have kept their feed quality much better than a conventional mixture would have done
- Will give an easily won crop after 16th July
- As no fertiliser may be applied the clover is very important

▶ Recommended sowing rate:
12-14 kg/acre 30-35 kg/HA

HF Fallow No.2

- 40% Late Perennial Ryegrass (diploid)
- 50% Late Perennial Ryegrass (tetraploid)
- 10% Timothy
- 100%

- This mixture has NO White Clover for situations where weed control may need to be carried out after 16th of July
- This should make a classic hay or haylage crop
- Low energy and low potash feed – ideal for dry cows

▶ Recommended sowing rate:
12-14 kg/acre 30-35 kg/HA

HF Fallow No.3

- 40% Late Perennial Ryegrass (diploid)
- 55% Late Perennial Ryegrass (tetraploid)
- 5% White Clover Blend
- 100%

- This mixture has NO Timothy for lighter soils or where aftermath grazing is most important. Fertiliser may be applied after the end of the fallow period (16th July)
- Plenty of fresh clean grass at a really useful time of year

▶ Recommended sowing rate:
12-14 kg/acre 30-35 kg/HA

AGRI-ENVIRONMENTAL CLIMATE SCHEME (AECS) MIXTURES

Green Cover After Retained Winter Stubbles

Before Autumn Sown Cereal
Spring Green Cover Mix

- 30% Crimson Clover
- 10% Egyptian Clover
- 60% Buckwheat

100%

▶ Recommended sowing rate:
5-6 kg/acre 20 kg Bags

Before Spring Sown Cereal
Over Wintered Green Cover Mix

- 25% Red Clover Blend
- 75% Ryegrass
- 100%

▶ Recommended sowing rate:
5-6 kg/acre 20 kg Bags

HF Your Countryside

For further advice in the specialist area of game cover, environmental stewardship and fodder crops or to request an HF Countryside brochure please contact your HF distributor or phone HF Seeds direct on 01506 674800

Farmland Wild Bird Seed

Annual Mix. For use with your own cereals

- 45% Linseed
- 25% Buckwheat
- 17% Fodder Radish
- 8% White Millet
- 5% Phacelia

100%

▶ Recommended sowing rate:
8 kg/acre 20 kg/HA



DISTRIBUTORS OF HF SEEDS IN SCOTLAND & NORTHERN ENGLAND

Agrii

22 West Road, Greshop Industrial Estate, Forres, Morayshire, IV36 2GW
Bourtie Works, Inverurie, Aberdeenshire, AB61 0HL

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Tel: 01467 626185

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Stirling Agricultural Centre, Hill of Drip, Stirling, Stirlingshire, FK9 4RN
Stirling Road, Milnathort, Kinross, Kinross-shire, KY13 9UZ
Dunsdale Haugh, Selkirk, Scottish Borders, TD7 5EF
Haweswater Road, Penrith Industrial Estate, Penrith, Cumbria, CA11 9EU
Lakeland Agricultural Centre, Cockermouth, Cumbria, CA13 0QQ

Tel: 01786 474826
Tel: 01577 862381
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Clark & Weir Ltd

2 Rosebank Road, Hawick, Roxburghshire, TD9 0DF

Tel: 07771 661164

Donald McGillvary Farm Supplies

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Tel: 07880 502272

Frontier Agriculture Ltd

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Windmill Way West, Ramparts Park, Berwick-upon-Tweed, Northumberland, TD15 1TB

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PO Box 26358, Ayr, Ayrshire, KA7 9BR

Tel: 07768 584326

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69 Lochlea Drive, Ayr, Ayrshire, KA7 3DS

Tel: 07770 810672

Reg Thornthwaite Agricultural Supplies

Fern Bank Cottage, Fern Bank Lane, Low Seaton, Workington, Cumbria, CA14 1LW

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Tel: 01899 309000 Mob: 07803 611780

Scotgrain Agriculture Ltd

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Unit 3, Markethill Industrial Estate, Turriff, Aberdeenshire, AB53 4QY
Elliot Industrial Estate, Arbroath, Angus, DD11 2NB

Tel: 01343 543281
Tel: 01888 568448
Tel: 01241 435421

Solway Agriculture Ltd

Glasgow Road, Lockerbie, Dumfriesshire, DG11 2SE

Tel: 01576 204124

South West Seeds Ltd from Agrovista

Kilfaddoch, Closeburn, Thornhill, Dumfriesshire, DG3 5HW

Tel: 01848 331416

Stephen Walker

Sockbridge, Penrith, Cumbria, CA10 2JN

Tel: 07816 526548

W & A Geddes Ltd

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Victoria Road, Brora, Sutherland, KW9 6LN
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